

CLAIMS

1. (Currently Amended) A deburring tool comprising:
 - a housing;
 - a pneumatic motor mounted in the housing and including a back wall and
 - a spindle having ~~an outer~~ a front end configured to attach to a deburring tool;
 - a spherical pivot bearing mounted adjacent the back wall of the pneumatic motor for allowing the motor to move relative to the housing;
 - a connector extending from the back wall of the pneumatic motor and
 - connected to the pivot bearing for permitting the pneumatic motor to move with the pivot bearing; and
 - a compliance device extending around the pneumatic motor at a location
 - between the back wall and the ~~outer~~ front end of the spindle for centering the pneumatic motor but wherein the compliance device is yieldable in response to the deburring tool encountering a disturbing force.
2. (Original) The deburring tool of claim 1 wherein the pivot bearing permits the pneumatic motor to pivot about the pivot bearing.
3. (Original) The deburring tool of claim 1 wherein the compliance device includes a dual pressure range.
4. (Currently Amended) The deburring tool of claim 3 wherein the compliance device includes a series of movable pistons disposed around the pneumatic motor and which are biased by a source of compressed air, and wherein each piston is adapted to operate in at least two modes and wherein the effective area of each piston exposed to the source of compressed air varies from one mode to the other mode.

5. (Original) The deburring tool of claim 4 wherein each piston is provided with a removable seal, and wherein in one mode of operation the seal is secured to the piston and in the other mode of operation the seal is removed from the piston.
6. (Original) The deburring tool of claim 1 wherein the pneumatic motor includes a rear portion and wherein the mass of the rear portion is greater than the mass of the spindle.
7. (Original) The deburring tool of claim 6 wherein the spindle includes an elongated projection and wherein the compliance device extends around the elongated projection of the pneumatic motor.
8. (Original) The deburring tool of claim 7 wherein the pivot bearing includes a socket and at least a partial ball movably mounted in the socket and including an opening; and wherein the connector extends into the opening of the partial ball and connects to the partial ball.
- [[8]]9. (Currently Amended) The deburring tool of claim 8 wherein the connector includes a stud that extends from the back of the pneumatic motor into the opening of the ball, the stud having an end portion that includes an opening formed therein, and wherein a spreading plug is secured within the opening of the stud causing the opening of the stud to spread and engage the ball.
10. (Original) The deburring tool of claim 1 wherein the pivot bearing includes a locating pin that limits movement of the pivot bearing.
11. (Original) The deburring tool of claim 1 wherein the housing includes an end plate disposed adjacent the back of the pneumatic motor, and wherein the pivot bearing is mounted to the end plate.
12. (Original) The deburring tool of claim 1 wherein the housing includes a surrounding sidewall structure wherein the tool includes an air inlet that extends through the sidewall structure and is connected to the pneumatic motor for delivering air to the motor.
13. (Original) The deburring tool of claim 1 including a tool secured to the spindle.

14. (Currently Amended) A deburring tool comprising:
- a housing;
 - a pneumatic motor mounted in the housing and including a back portion
and a front portion;
 - a pivot bearing mounted adjacent the back portion of the pneumatic
motor; and
 - a connector extending between the back portion of the pneumatic motor
and the pivot bearing for connecting the pneumatic motor to the
pivot bearing such that the pneumatic motor moves with the
movement of the pivot bearing;
- wherein the connector includes a terminal end that extends into the opening of the pivot
bearing and wherein an opening is formed within the terminal end of the
connector for receiving a spreading plug that spreads the terminal end of the
connector into engagement with the pivot bearing.
15. (Currently Amended) The deburring tool of claim 14 wherein the back portion of the
motor includes a back wall and wherein the connector extends ~~outwardly~~ from the back wall of
the pneumatic motor into and through an opening formed in the pivot bearing.
16. Canceled.
17. (Currently Amended) The deburring tool of claim ~~[[16]]~~ 14 wherein the pivot bearing
includes a socket and a ball movably contained within the socket.
18. (Original) The deburring tool of claim 17 including a pin extending through the socket
into an opening formed on the ball.
19. (Original) The deburring tool of claim 14 wherein the connector and pneumatic motor
move about the pivot bearing.
20. Canceled.

21. Canceled.
22. Canceled.
23. Canceled.
24. Canceled.
25. Canceled.
26. Canceled.
27. Canceled.
28. Canceled.
29. Canceled.
30. Canceled.
31. (New) A deburring tool comprising:
 - a housing;
 - a pneumatic motor mounted in the housing and including a back wall and
 - a spindle having a front end;
 - a pivot bearing mounted adjacent the back wall of the pneumatic motor;
 - a connector extending from the back wall of the pneumatic motor and
 - connected to the pivot bearing for permitting the pneumatic motor to move with the pivot bearing;
 - a compliance device extending around the pneumatic motor at a location between the
 - back wall and the front end of the spindle for centering the pneumatic motor but
 - wherein the compliance device is yieldable in response to the deburring tool encountering a disturbing force; and
 - the pivot bearing including a locating pin that limits movement of the pivot bearing.
32. (New) The deburring tool of claim 31 wherein the housing includes an end plate disposed adjacent the back of the pneumatic motor, and wherein the pivot bearing is mounted to the end plate.

33. (New) The deburring tool of claim 31 wherein the compliance device includes a series of movable pistons disposed around the pneumatic motor.

34. (New) The deburring tool of claim 31 wherein the pneumatic motor includes a back portion and a front portion wherein the back portion includes a mass greater than the mass of the front portion.

35. (New) A deburring tool comprising:

a housing;

a pneumatic motor mounted in the housing and including a back wall and a spindle having a front end;

a pivot bearing mounted adjacent the back wall of the pneumatic motor;

a connector extending from the back wall of the pneumatic motor and connected to the pivot bearing for permitting the pneumatic motor to move with the pivot bearing;

a compliance device extending around the pneumatic motor at a location between the back wall and the front end of the spindle for centering the pneumatic motor, the pneumatic motor including a rear portion having a mass greater than the mass of the spindle, but wherein the compliance device is yieldable in response to the deburring tool encountering a disturbing force;

wherein the spindle includes an elongated projection and wherein the compliance device extends along the elongated projection of the pneumatic motor; and

wherein the pivot bearing includes a socket and at least a partial ball movably mounted in the socket and including an opening, and wherein the connector extends into the opening of the partial ball and connects to the partial ball.

36. (New) The deburring tool of claim 35 including a locating pin that limits the movement of the pivot bearing.

37. (New) The deburring tool of claim 35 wherein the compliance device includes a series of movable pistons disposed around the pneumatic motor.

38. (New) The deburring tool of claim 35 wherein the pivot bearing includes a spherical bearing.

39. (New) The deburring tool of claim 35 wherein the center of gravity of the pneumatic motor lies within a back portion of the pneumatic motor, and wherein the compliance device is spaced from the center of gravity of the pneumatic motor.

40. (New) A deburring tool comprising:

a housing;

a pneumatic motor mounted in the housing and including a back wall and a spindle having a front end;

a pivot bearing mounted adjacent the back wall of the pneumatic motor;

a connector extending from the back wall of the pneumatic motor and connected to the pivot bearing for permitting the pneumatic motor to move with the pivot bearing;

a compliance device extending around the pneumatic motor at a location between the back wall and the front end of the spindle for centering the pneumatic motor but wherein the compliance device is yieldable in response to the deburring tool encountering a disturbing force; and

wherein the compliance device includes a dual pressure range, the compliance device including a series of movable pistons disposed around the pneumatic motor and which are biased by a source of compressed air, and wherein each piston is adapted to operate in at least two modes and wherein the effective area of each piston exposed to the source of compressed air varies from one mode to the other mode.